Filing Date: January 17, 2002

THREE-DIMENSIONAL PHOTONLC CRYSTAL WAVEGUIDE STRUCTURE AND METHOD

## Page 2 Dkt: 1303.034US1

## **IN THE SPECIFICATION**

Please amend the specification as follows:

The paragraph beginning at page 1, line 7 is amended as follows:

This patent application is related to U.S. Patent Application No. 09/861,770 filed on May
22, 2001, and entitled "Method of forming three-dimensional photonic band structures in solid
materials," now issued as U.S. Patent 6,582,512, which Patent Application is incorporated herein
by reference. This patent application is also related to U.S. Patent Application No.
[[]] 10/053,003, co-filed with the present application filed on January 17, 2002, and
entitled "Three-dimensional complete bandgap photonic crystal formed by crystal modification,"
which Patent Application is incorporated herein by reference.
The paragraph beginning at page 9, line 13 is amended as follows:
As mentioned above, the 3D photonic crystal waveguide structure of the present

As mentioned above, the 3D photonic crystal waveguide structure of the present invention requires the formation of a complete bandgap 3D photonic crystal. However, certain 3D photonic crystals formed with certain space group symmetries and voids of a given size and/or shape may not provide the necessary complete photonic bandgap at one filling ratio but may do so at another. Thus, the present invention includes a method of forming a waveguide structure using a 3D photonic crystal modified to form a complete bandgap. A technique for forming a modified 3D photonic crystal structure is described in U.S. Patent Application No.

[\_\_\_\_\_\_] 10/053,003, filed on [\_\_\_\_\_\_] January 17, 2002 and entitled "Three-dimensional complete photonic bandgap crystal formed by crystal modification," which Patent Application is incorporated by reference herein.